Stephen H.M. Bloch #7813
Tiffany Bartz # 12324
SOUTHERN UTAH WILDERNESS ALLIANCE
425 East 100 South
Salt Lake City, UT 84111
Telephone: (801) 486-3161

Walton Morris, *pro hac vice*
MORRIS LAW OFFICE, P.C.
1901 Pheasant Lane
Charlottesville, VA 22901
Telephone (434) 293-6616

Sharon Buccino, *pro hac vice*
NATURAL RESOURCES DEFENSE COUNCIL
1200 New York Ave., NW, Suite 400
Washington, DC 20005
Telephone: (202) 289-6868

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

UTAH CHAPTER OF THE SIERRA CLUB, et al.,
Petitioners,

DIVISION OF OIL, GAS AND MINING,
Respondent, and

ALTON COAL DEVELOPMENT, LLC, and KANE COUNTY, UTAH,
Intervenors-Respondents.

Docket No. 2009-019
Cause No. C/025/0005

PETITIONERS' MEMORANDUM IN OPPOSITION TO THE FIRST MOTION FOR PARTIAL SUMMARY JUDGMENT FILED BY ALTON COAL DEVELOPMENT, L.L.C.

Utah Chapter of the Sierra Club ("Sierra Club"), Southern Utah Wilderness Alliance ("SUWA"), Natural Resources Defense Council ("NRDC"), and National Park Conservation Association ("NPCA")(collectively, "Petitioners") oppose the first and second motions for partial

summary judgment which intervenor-respondent Alton Coal Development, L.L.C., ("ACD") filed in this proceeding on January 15, 2010. In this memorandum, Petitioners state the grounds upon which they oppose (1) ACD's *Motion for Partial Summary Judgment – Baseline Hydrologic Information* ("ACD's First Partial SJ Motion") and (2) ACD's argument for dismissal of Petitioners' claims concerning information on alternative sources of water and water replacement obligations, *Respondent Alton Coal Development, LLC's Motion and Memorandum in Support of Partial Summary Judgment* ("ACD's Second Partial SJ Motion") at 18-20. Petitioners respond to the remaining arguments contained in ACD's Second Partial SJ Motion in a separate memorandum filed simultaneously with this one.

I.

This Board Has No Authority to Enter Summary Judgment In Formal Adjudicatory Proceedings Concerning Approval of Applications to Conduct Surface Coal Mining Operations

The statutes and regulations that govern (1) the powers and authority of this Board and (2) the conduct of formal adjudicative proceedings on administrative review of decisions of the Utah Division of Oil, Gas and Mining ("the Division") to approve applications for permits to conduct surface coal mining and reclamation operations collectively impose a mandatory, non-discretionary duty on this Board to conduct an evidentiary hearing upon the demand of any party to such proceedings. Evidentiary hearings are necessary to permit any requesting party to, among other things, cross-examine any other party and the witnesses who provide evidence at the behest of another party. Because this Board is obligated by statute to afford parties to formal adjudicatory proceedings the right of cross-examination, the Board has no authority, absent the waiver of that right by all parties, to grant summary judgment to any party, either in whole or in part. Petitioners have not and will not waive their right to cross-examine in this proceeding.

This Board's authority to conduct formal administrative proceedings to review the Division's coal mining permit approval decisions is governed by Utah Code § 40-10-6.7(2), which provides that:

> (a) (I) Formal adjudicative proceedings shall be conducted by the division or board under this chapter and shall be referred to as hearings or public hearings.
> (ii) The conduct of hearings **shall be governed by rules adopted by the board** which are in accordance with Title 63G, Chapter 4, Administrative Procedures Act.
> (b) Hearings under this chapter **shall be conducted in a manner which guarantees** the parties' due process rights. This includes:
> (I) the right to examine any evidence presented to the board;
> (ii) **the right to cross-examine any witness**; and
> (iii) a prohibition of ex parte communication between any party and a member of the board.
> (c) A verbatim record of each public hearing required by this chapter shall be made, and a transcript made available on the motion of any party or by order of the board.

(Emphasis supplied.) Additionally, Utah Code § 40-10-14(3), which also governs proceedings following a decision of the Division to approve a coal mine permit application, provides as follows:

> Upon approval of the application, the permit shall be issued. If the application is disapproved, specific reasons shall be set forth in the notification. Within 30 days after the applicant is notified of the final decision of the division on the permit application, the applicant or any person with an interest which is or may be adversely affected may request a hearing on the reasons for the final determination. **The board shall hold a hearing pursuant to the rules of practice and procedure of the board** within 30 days of this request and provide notification to all interested parties at the time that the applicant is notified. Within 30 days **after the hearing** the board shall issue and furnish the applicant, and all persons who participated in the hearing, with the written decision of the board granting or denying the permit in whole or in part and stating the reasons.

(Emphasis supplied.)

Read together, these statutes require this Board to afford all litigants in formal adjudicative proceedings such as this one the opportunity to cross-examine other parties and any witness who provides evidence on behalf of another party. This obligation precludes the Board from awarding

summary judgment to any party that, as ACD has done in this proceeding, unilaterally attempts to avoid an evidentiary hearing on any issue by presenting evidence through one-sided affidavits or declarations.

The fact that summary judgment procedure allows a party that opposes summary judgment to present counter-affidavits or declarations does nothing to cure the fatal defect in ACD's current motions: the right to cross-examine provides a unique opportunity to demonstrate, out of the mouth of hostile parties or witnesses themselves, the error, inadequacy, or bias in another party's evidence with a force that the counter-statements of a party's own witnesses often simply do not carry. Because the right to cross-examine is statutorily guaranteed in formal adjudicatory proceedings under the Board's organic statute, the Board may not adopt summary judgment or any other procedural device that impairs or eliminates a party's right to cross-examine.

Petitioners acknowledge the statement in the Utah Administrative Procedures Act that:

> This chapter **does not preclude** an agency, prior to the beginning of an adjudicative proceeding, or the presiding officer during an adjudicative proceeding from granting a timely motion to dismiss or for summary judgment if the requirements of Rule 12(b) or Rule 56 of the Utah Rules of Civil Procedure are met by the moving party, except to the extent that the requirements of those rules are modified by this chapter.

Utah Code § 63G-4-102(4)(b) (emphasis supplied). The quoted language does not, however, authorize this Board to grant summary judgment in contravention of the statutory cross-examination right of litigants established under the Board's organic statute. Instead, the quoted language simply clarifies that nothing in the Utah Administrative Procedures Act bars entry of summary judgment in formal adjudicative proceedings. The quoted language, which applies to formal adjudicative proceedings generally, cannot reasonably be interpreted to trump the more specific provisions of this Board's organic statute, which concerns only the class of formal adjudicative proceedings that review approval of applications for permits to conduct surface coal mining operations and other

matters arising under Utah's approved state regulatory program for implementing the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. §§ 1201-1328 ("SMCRA"). *State v. Hamblin*, 676 P.2d 376, 378 (Utah 1983) ("A specific statute controls a general one."); *see also Floyd v. Western Surgical Associates, Inc.*, 773 P.2d 401, 404 (Utah App. 1989) *citing State v. Burnham*, 49 P.2d 963, 965 (Utah 1935) ("Under general rules of statutory construction, where two statutes treat the same subject matter, and one statute is general while the other is specific, the specific provision controls.").

It is important to note that the Board's organic statute, unlike the Utah Administrative Procedures Act, does not establish a procedure for obtaining summary judgment or summary decision prior to an evidentiary hearing in formal adjudicative proceedings. Because express provisions for summary judgment or summary decision are very commonly included in civil procedural systems in the United States, including civil adjudications in the Utah state court system, *see* Rule 56 of the Utah R. Civ. P. 56, Fed. R. Civ. P. 56, 43 C.F.R. 4.1125 (authorizing federal administrative law judges to enter summary decision in administrative review proceedings under SMCRA), the absence of any authorization of summary judgment or summary decision in the Board's organic statute forcefully underscores the express statutory requirement that this Board afford every litigant the right of cross-examination and, consequently, that this Board conduct an evidentiary hearing in every instance unless all parties waive that right.

As mentioned earlier, the Board's organic statute does direct this Board to adopt procedural rules "which are in accordance with Title 63G, Chapter 4, Administrative Procedures Act." Tellingly, however, the procedural rules for formal adjudicative proceedings that this Board has adopted do not authorize summary judgment, presumably in recognition of the statutory cross-examination rights established in the organic statute. The fact that the Board's rules do not authorize

summary judgment does not prevent them from being "in accordance with" the Utah Administrative Procedures Act because, as quoted above, that statute does not require agencies to authorize entry of summary judgment. Instead, the Utah Administrative Procedures Act simply clarifies that its provisions do not **preclude** agencies from entering summary judgments. For this reason, the Board's regulation that reserves all rights, powers, and authority described in the Utah Administrative Procedures Act is not effective to empower this Board to issue summary judgments. Because the Utah Administrative Procedures Act does not itself grant any agency the right, power, or authority to grant summary judgment, reference to that statute as a source of summary judgment authority necessarily must fail.

Instead, the authority of any Utah agency to grant summary judgment in formal adjudicative proceedings must come, if at all, from its organic statute. For all the reasons explained earlier in this section, this Board's organic statute does not authorize entry of summary judgment. Instead, it establishes cross-examination rights that are flatly incompatible with summary judgment. Accordingly, due to the absence of statutory or regulatory authority to enter summary judgment, this Board must deny ACD's motions out of hand.

II.

Alternatively, This Board's Election Not to Adopt Regulations That Authorize Entry of Summary Judgment in Formal Adjudicative Proceedings Precludes Entry of Summary Judgment in This Case

Even if this Board's organic statute did not effectively preclude entry of summary judgment – which it does – that statute directs the Board to adopt rules to govern the conduct of hearings in matters such as this one. The Board has done so, without including in those rules any provision for entry of summary judgment. If that fact is not attributable to the Board's recognition that its organic statute contains provisions that are incompatible with summary judgment, then this Board simply

chose not to include summary judgment as a means of resolving some or all of the issues that arise in formal adjudicative proceedings. As with every other component of the approved state regulatory program for SMCRA, the federal Office of Surface Mining Reclamation and Enforcement ("OSM") approved this Board's regulations – absent any provision for summary judgment – as consistent with SMCRA and its implementing federal regulations.

To the extent that the Board has statutory authority to provide for entry of summary judgment in coal mining matters – which, again, it does not – the Board's organic statute still requires the Board to implement that authority, if at all, through the adoption of rules. At this juncture, no rule authorizing summary judgment in coal mining cases before this Board may take effect unless and until OSM approves the proposed new rule following notice and public comment. 30 C.F.R. § 732.17(g). Thus, because the Board has previously elected not to adopt rules authorizing entry of summary judgment in coal mine cases, and because the Board cannot reasonably expect to obtain approval of any regulatory change prior to ruling on ACD's pending summary judgment motions, the Board must deny those motions as unauthorized.

III.

Alternatively, Utah Case Law Prohibits Entry of Summary Judgment Prior to Completion of Discovery

Even if this Board were fully authorized to entertain and grant motions for summary judgment – which it is not – ACD's motion for summary judgment is fatally premature. The Supreme Court of Utah has held that "[l]itigants must be able to present their cases fully to the court before judgment can be rendered against them unless it is obvious from the evidence before the court that the party opposing judgment can establish no right to recovery." *Mountain States Tel. & Tel.*

Co. v. Atkin, Wright & Miles, 681 P.2d 1258, 1261 (Utah 1984) (emphasis added); see also *Krantz v. Holt*, 819 P.2d 352, 356 (Utah 1991). The Supreme Court has further noted that:

> Prior to the completion of discovery, however, it is often difficult to ascertain whether the nonmoving party will be able to sustain its claims. In such a case, summary judgment should generally be denied.

See Pepper v. Zions First Nat'l Bank, N.A., 801 P.2d 144, 154 (Utah 1990) (summary judgment premature since nonmoving party might be able, through additional discovery, to prove different theories of recovery); *Cox v. Winters*, 678 P.2d 311, 315 (Utah 1984) (summary judgment not proper before nonmoving party has carried "already-begun discovery proceedings to completion"); *Auerbach's, Inc. v. Kimball*, 572 P.2d 376, 377 (Utah 1977) (summary judgment premature because nonmoving party's discovery not yet complete).

In this case, Petitioners have timely moved for leave to conduct discovery, but as yet have not received authority to conduct any discovery at all. Among the material facts that Petitioners seek to discover are:

(1) whether ACD or the Division are in possession of additional baseline hydrologic data concerning the permit or cumulative impact areas;

(2) whether the laboratory reports, field notes, or monitoring logs associated with baseline hydrologic data that ACD or the Division have made public verify reported data or, alternatively, demonstrate that reported data are flawed;

(3) whether ACD's data collection procedures satisfy established norms or constitute unexplained and unjustified departures from acceptable practice;

(4) similarly, whether the Division's evaluation of ACD's baseline hydrologic data comported with established norms or constituted unexplained and unjustified departures from acceptable practice;

(5) the basis of the numerous factual disputes and less-than-fully-explained defenses contained in the responses of ACD and the Division to Petitioners' request for agency action;

(6) whether Petitioners physical inspection of the pertinent permit and cumulative impact areas will reveal additional inaccuracies or incompleteness in ACD's permit application; and

(7) whether the Division's approval of ACD's inaccurate and incomplete permit application occurred, in whole or in part, as the result of political pressure placed on Division personnel by the Governor's office.

Petitioners' "good cause" for conducting the discovery they have requested is established by, among other discrepancies and obvious errors in ACD's baseline hydrologic data, each of the following:

(1) ACD's report of water quality data from monitoring station SP-6 on December 30, 2008, without a report of the flow rate at that site, *see Declaration of Elliott Lips*, Petitioners' consultant on hydrogeology, which Petitioners attach as Exhibit 1 to this memorandum ("the Lips Declaration"), ¶ 69 – this discrepancy demonstrates either that ACD's water sampler fictionalized the water quality data that he or she reported or else the water sampler failed to record the rate of flow that he or she was charged with measuring, and Petitioners are entitled to discover which;

(2) ACD's report of water quality data from monitoring station SP-16 on December 30, 2007, without a report of the flow rate at that site, *see* Lips Declaration ¶ 80 – again, either ACD's water sampler fictionalized the water quality data that he or she reported or else the water sampler failed to record the rate of flow that he or she was charged with measuring, and Petitioners are entitled to discover which;

(3) ACD's report of water quality data from monitoring station SP-40 on June 22, 2007, without a report of the flow rate at that site, *see* Lips Declaration ¶ 87 – once again, either ACD's water sampler fictionalized the water quality data that he or she reported or else the water sampler failed to record the rate of flow that he or she was charged with measuring, and Petitioners are entitled to discover which;

(4) the fact that, despite ACD's claim that "[n]o significant source or flow of groundwater was observed in the Dakota Sandstone immediately below the coal seam," ACD's First Partial SJ Motion at 8 (¶ 32), (a) ACD reports that ground water does flow from the Dakota Formation at three seeps and springs south of the permit area (PAP pg 7-4), (b) ACD reports that water from at least one of these springs is used for at least stock watering (PAP Table 7-1 App. B App. 7-1), and (c) ACD reports that one of these springs (SP-4) has had flow on 22 of 22 inspections and flows between 691 gallons per day and 1,382 gallons per day (average of 1,023 gallons per day), *see* Lips Declaration ¶ 112 – Petitioners are entitled to discover which of ACD's characterizations is accurate;

(5) the fact that ACD reports flow and water quality data for monitoring site SW-1 on June 22, 2007, and August 21, 2008, but also reports that the site was inaccessible on those dates, *see* Lips Declaration ¶ 122 – either ACD's water sampler falsely reported that the site was inaccessible or the sampler fictionalized the flow and water quality data that he or she reported, and Petitioners are entitled to discover which; and

(6) the fact that ACD reports flow and water quality data for monitoring site SW-5 on September 29, 2007, and August 21, 2008, but also reports that the site was

inaccessible on those dates, *see* Lips Declaration ¶ 149 – again, either ACD's water sampler falsely reported that the site was inaccessible or the sampler fictionalized the flow and water quality data that he or she reported, and Petitioners are entitled to discover which.

Of equal importance, Petitioners are unable, prior to discovery, to determine whether 39 of ACD's 67 supposedly "undisputed" facts are indeed accurate. Given the host of currently identified discrepancies and errors in ACD's hydrologic data, *see* Lips Declaration generally, denying Petitioners a fair opportunity to discover the whole truth through the discovery process would constitute clear legal error.

IV.

Alternatively, Petitioners' Genuine Dispute of the Material Facts on Which ACD Bases Its Motions Precludes Entry of Summary Judgment

Even if the Board had authority to grant summary judgment despite Petitioners' pending discovery requests, summary judgment would be inappropriate because Petitioners, even without the aid of the discovery, dispute many of the material facts that underlie ACD's motions. The Lips Declaration identifies the specific factual assertions that ACD claims are "undisputed" but which the publicly available documents belie.

As the Lips Declaration explains in detail, Petitioners dispute a host of factual assertions contained in ACD's motions, including but not limited to the six specific erroneous ACD claims identified in the preceding section of this memorandum. The governing case law in Utah holds that "[o]ne sworn statement under oath [involving a material fact] is all that is necessary to create a factual issue, thereby precluding summary judgment." *Nyman v. McDonald*, 966 P.2d 1210, 1213 (Utah App. 1998) quoting *Amica Mut. Ins. Co. v. Schettler*, 768 P.2d 950, 957 (Utah App.) cert.

denied, 109 Utah Adv. Rep. 39 (Utah 1989). In light of the pervasive conflicts in the facts asserted by ACD's consultant on hydrogeology on the one hand and by Mr. Lips on the other, the controlling case law in Utah bars entry of summary judgment and compels the Board to deny ACD's motions for summary judgment and instead hold an evidentiary hearing in this case.

V.

Alternatively, ACD Is Not Entitled to Judgment As a Matter of Law

Even if summary judgment were otherwise appropriate – which it certainly is not – ACD has failed to demonstrate that it is entitled to judgment on either the water replacement issue or any of the baseline hydrology issues. To the contrary, the governing law favors Petitioners in every instance.

A. Baseline Hydrologic Data - Statutory and Regulatory Background

To lay a proper foundation for addressing ACD's misguided legal arguments on baseline hydrology issues, Petitioners first summarize the pertinent statutory and regulatory background. In deliberating the bills that ultimately became SMCRA, Congress knew that coal mining in Western States, where the climate is arid and water therefore in short supply, "the removal of thick coal seams and the consequent disruption of stream and river channels forming part of the hydrologic regime of the area will pose difficult and in some cases insurmountable reclamation problems." H.R. Rep. No. 218, 95th Cong. 1st Sess. 59 (1977). Congress went on to identify both the source of problems that led to enactment of SMCRA and the statutory requirements designed to resolve those problems:

> In any coal surface mining regulatory system, the determination that reclamation can or cannot be accomplished depends initially upon the judgment of the regulatory agency. Experience has shown that **without a thorough and comprehensive data base presented with the permit application, and absent analysis and review both by the agency and by other affected parties based on**

> **adequate data**, th[i]s judgment has often traditionally reflected the economic interest in expanding a State's mining industry. **Valid environmental factors tend to receive short shrift**.
>
> . . .
>
> The physical parameters of the mining site and its environs must be clearly set forth in the application, so as to yield an accurate picture of the geological, hydrologic, surficial, developmental, ecological and general land use features of the landscape which will be affected directly or indirectly by the operator. **Due to the movement of water through the environment, the hydrologic aspects of the application requirements will have the most profound implications for offsite residents and the community as a whole**.
>
> . . .
>
> The operator must show, through the vehicle of a mining and reclamation plan, just how he intends to protect surface and ground water, (both on- and off-site) and the rights of water users.

Id. at 91 (emphases supplied). With respect to hydrologic monitoring, Congress made clear its intention that "data collection and resulting analysis take place **before** and continue throughout the mining and reclamation process, **and be conducted in sufficient detail so that accurate assessment of the impact of mining on the hydrologic setting of the area can be determined**." *Id.* at 120.

In the statement of basis and purpose for the national regulations that implement SMCRA's geologic information and hydrologic protection requirements, the Secretary of the Interior ("the Secretary") made clear that "scientifically sound information is imperative to evaluate compliance with the regulatory standards." 48 Fed. Reg. 43,965 col. 3 (Sep. 26, 1983). The Secretary then explained that the scope of ground-water baseline data collection must extend not just to "each significant water bearing stratum" – as he at one time had proposed – but instead to "each water bearing stratum . . . to ensure the collection of all **necessary** information." *Id.* at 43,967 col. 1 (emphasis supplied); *see also id.* at 43,968 col. 2 ("baseline information is mandated for all water-bearing strata"). Earlier in the same document, the Secretary pointed out that:

> Commonly, the stratum immediately below a coal seam consists of very fine grained sedimentary rock which has a low transmissivity or does not have the hydrologic properties necessary to transmit or yield ground water. This stratum may range in thickness from less that 2 feet to several feet and has been variously referred to locally as "underclay" or "fire clay." Although this "underclay" or "fire clay" stratum is generally not considered an aquifer, the next lower (i.e., underlying) stratum commonly has improved hydraulic capabilities and may be an aquifer. Depending upon site geology and operating procedures, such an aquifer may have the potential of being adversely impacted by surface coal mining activities such as blasting, which may fracture any stratum between this aquifer and the coal seam. Therefore, **the applicant has the responsibilities for determining the presence or absence of such an aquifer below the coal seam "underclay" and for assessing its potential for being adversely inpacted (*sic*) by the mining activity**.
>
> The language of the final rule clarifies the applicant's responsibilities. It sets forth the vertical depth for geologic information collection. It requires data from the deeper of either the stratum immediately below the lowest coal seam to be mined or any aquifer below the lowest coal seam to be mined which may be adversely impacted by mining.

Id. at 43,961-62 (internal citation omitted) (emphasis supplied).

In addressing baseline hydrologic data requirements, the Secretary rejected the suggestion that he eliminate the minimum information requirements on the ground that they could be unnecessary and burdensome in some circumstances. Instead, the Secretary stated that:

> Although the regulatory authority must have the prerogative to specify information requirements for each proposed permit area, **there is a minimum of information which will be necessary for descriptive and monitoring purposes** as well as for serving as a basis for the PHC determination. The minimum requirements specified are **essential** for most operations, and they likely will be expanded by the regulatory authority to account for local hydrologic conditions.

Id. at 43,968 col. 1.

Similarly, the Secretary rejected a suggestion that he modify requirements for seasonal ground-water quantity and quality information with the phrase "when obtainable." The Secretary responded that:

> OSM understands that certain wells may pose problems for sampling. However, **seasonal variation is essential to an understanding of the dynamic nature of the**

> **hydrologic regime**. And seasonal variation data are required by sections 507(b) and 508(a) of [SMCRA].

Id. at 43,969 col. 2 (emphasis supplied). The Secretary also rejected the suggestion that permit approvals are not precluded in areas where actual low-flow and seasonal variation information is unavailable. Instead, the Secretary insisted that:

> Flow and seasonal variation information is required for all permit applications as prescribed by [SMCRA]. **If this information is unavailable, the applicant must obtain it.**

Id. at col. 3 (emphasis supplied).

SMCRA's legislative history and the Secretary's basis-and-purpose statement for the national regulations that implement SMCRA constitute controlling interpretations of the same or similar geologic and hydrologic information requirements in the statutes and regulations that the Utah Legislature enacted and this Board promulgated to form the approved Utah state regulatory program for implementing SMCRA. As courts in States with approved SMCRA regulatory programs have recognized:

> Federal legislative history and interpretation must control construction of the state law in these circumstances as a matter of simple federal preemption. A common tenet of modern federalism holds that in substantive areas preempted by the federal government, such as coal surface mine reclamation, states may not enact laws that are less restrictive than or inconsistent with the federal law.

Brown v. Red River Coal Co., 373 S.E.2d 609, 610, 7 Va. App. 331 (Va. App. 1988) (citation omitted); *see also* Syl. pt. 5, *Schultz v. Consolidation Coal Co.*, 197 W.Va. 375, 475 S.E.2d 467 (1996) ("A state regulation enacted pursuant to the West Virginia Surface Coal Mining and Reclamation Act, West Virginia Code §§ 22A-3-1 to -40 (1993), [now West Virginia Code §§ 22-3-1 to -32 (1994 & Supp.1995)], must be read in a manner consistent with federal regulations

enacted in accordance with the Surface Mining Control and Reclamation Act, 30 United States Code Annotated §§ 1201 to -1328 (1986)").

In addition to SMCRA's legislative history and regulatory preambles, a current OSM technical reference document, entitled *Permitting Hydrology* (May 2002), establishes "a technically sound approach for obtaining geologic and hydrologic information to be used in the review and preparation of coal mine permit applications." Although the document states that regulators may adopt alternative approaches to the tasks in question, it emphasizes that "[w]hatever approach is chosen, it **must provide a framework for technically and scientifically sound and supported hydrologic impact analyses** . . . ." *Id.* at iii (Forward). OSM's guidance document makes the following pertinent observations:

> Baseline sites should be distributed on and around the proposed operation and located both up gradient and down gradient from the area to be disturbed. Baseline information collected should be adequate to characterize conditions **throughout the portions of the aquifer that may be impacted later by the proposed operation.**

Id at II-30.

> Two observation sites (e.g., springs, wells) from each aquifer identified, one located up gradient and the other down gradient from the permit area, will usually provide adequate coverage to characterize water quality.

Id. at II-31.

> Because seasonal phenomena are cyclic, **one sample from a given site is not adequate for accurately describing complete seasonal flow conditions.** The seasonal requirement may be satisfied by quality and quantity values **from samples collected during actual calendar seasons (spring, summer, fall and winter).**

Id. at II-33-34 & II-38 (emphases supplied). These "technically sound" principles themselves establish a framework against which the adequacy and scientific validity of any alternative procedure must be judged.

B. Baseline Hydrologic Data – Utah Regulations and Technical Guidance

Although organized differently from the Secretary's national regulations, the Utah regulations on geologic and baseline hydrologic information requirements for coal mining permit applications – Utah Admin. Code R645-301-600 and R645-301-724 – contain parallel or mirror requirements corresponding to each of the requirements of their federal counterparts. For reasons explained earlier in this memorandum, these provisions must be interpreted consistently with federal interpretation of their national counterparts.

The Division has also provided technical guidance for determining the amount and nature of baseline hydrologic data needed to characterize seasonal variation in flow and water quality. State of Utah, Department of Natural Resources, Division of Oil, Gas & Mining, *Coal Regulatory Program Guideline No. Tech-004* (Jun. 27, 2006) ("Tech 004"). Among other things, Tech 004 presents the Division's recommendations for collection of adequate baseline hydrologic information to satisfy the requirements of R645-301-724.100 and 724.200. The guideline states that:

> It is recommended that baseline information be collected quarterly for a minimum of two years prior to permit issuance. Data will be sufficient to demonstrate seasonal variation in quality and quantity for each source.

Id. at 10. Tech 004 defines "quarterly monitoring" to mean "collecting representative water samples from all designated water monitoring locations at least once per three month period with a minimum of one month between sampling events." *Id.* at 4. However, Tech 004 also speaks to sampling frequency in its Tables 1 and 2. Table 1 indicates that surface water baseline monitoring locations should be sampled monthly for water quality and flow measurements during the period of flow for intermittent streams. As with OSM's guidance document, the baseline monitoring standards recommended in Tech 004 establish a framework against which the adequacy and scientific validity of any alternative procedure must be judged.

C. Baseline Hydrologic Data – Petitioners' Claims

Petitioners challenge the accuracy and completeness of ACD's baseline hydrologic data in three principal respects. First, for most surface water and ground water baseline monitoring stations, ACD has failed to present scientifically sound, reliable data collected quarterly over a minimum of two years. Second, for most surface water and groundwater baseline monitoring stations, ACD has failed to present scientifically sound, reliable data for each hydrologic season (*i.e.*, December-February, March-May, June-August, and September-November). These shortcomings are more particularly described in the tables attached as Exhibits 1-5 to Petitioners' request for agency action. Third, ACD has failed to present adequate geological or hydrologic baseline information on the aquifer or aquifers within the Dakota Formation that lies below the coal that the company proposes to mine. Each of these claims is fully supported by the applicable regulations and pertinent federal and state interpretations of those requirements, and thus ACD's claim that it is entitled to judgment as a matter of law necessarily fails.

D. The Legal Theories on Which ACD Rests Its Motion for Partial Summary Judgment Is Fundamentally Flawed

1. Deference Afforded the Division's Technical Experts

ACD first rests its case for summary judgment on the notion that, because this Board has indicated that it will afford deference to the pertinent technical determinations of Division staff in a manner similar to the deference that federal administrative law judges accord OSM technical determinations in permit review proceedings under SMCRA directly, Petitioners cannot possibly prevail on their challenges as a matter of law. ACD's Second Partial SJ Motion at 15-16; *see Order Concerning Scope and Standard of Review* (Jan. 13, 2010) ("Scoping Order") at 4-5 (citing *Save Our Cumberland Mountains, Inc. v. Office of Surface Mining Reclamation and Enforcement*, No.

NX-97-3-PR (U.S.D.O.I. - O.H.A., July 30,1998) (the "SOCM decision") at 19-22 (holding that the agency "is entitled to rely upon the expertise of its technical experts," and that "to the extent OSM's decision was based upon substantial technical analysis, it will not be set aside absent a showing of error, i.e., a showing that it is contrary to the evidence or otherwise arbitrary or capricious"). ACD would be entitled to summary judgment on the basis of that argument only if the Board's deference to the Division's technical experts was so conclusive that Petitioners and others who challenge the Division's technical determinations (including ACD or other permittees, whenever the shoe is on the other foot) were not even entitled to be heard on whether those determinations are contrary to evidence or otherwise arbitrary, capricious. That certainly is not the level of deference that the SOCM decision afforded OSM's experts – the permit challengers in that case not only were heard on all six issues, but won half of them. Because the Board has specified that it will accord "similar deference" to OSM, Petitioners are no less entitled to present their case at an evidentiary hearing than were the permit challengers in the SOCM decision.

Petitioners acknowledge that they must present evidence of more than mere disagreement between their expert on hydrogeology and the Division's experts. At this juncture, however, Petitioners are entitled to discover facts that may demonstrate error or arbitrary or capricious decision-making and thus trump the deference generally afforded to the Division's experts. Following discovery, Petitioners are entitled to present their case at an evidentiary hearing.

In short, the deference that the Board has indicated it will afford to the Division's technical experts may make Petitioners' path more difficult, but it does not entitle ACD to judgment as a matter of law. After all, deference goes to the manner in which this Board evaluates the factual and

expert opinion evidence it receives during an evidentiary hearing, **not** to legal standard for determining which party prevails.[1]

To be sure, ACD asserts that the Division's selection of monitoring locations and protocols for baseline data collection was not arbitrary and capricious. ACD offers no explanation of why that is so, however. Litigants frequently prove that government action is arbitrary or capricious, as the SOCM decision amply demonstrates. ACD is scarcely entitled to judgment as a matter of law based on an unsupported assertion that Petitioners' evidence, about which ACD knows very little at this juncture, will not show arbitrary or capricious or otherwise unlawful decision-making by the Division.

2. The Supposedly Undisputed Content of ACD's Permit Application Package

Next, ACD asserts that "the contents of the permit application package . . . and the Division's Coal Mining Water Quality Database are not in dispute, and whether information is present or absent in these sources can be determined without the need for hearing." ACD's First Partial SJ Motion at 18. The assertion is total fiction.

At no point in these proceedings has either the Division or ACD identified the contents of the permit application or the water quality database as they stood on the day that the Division approved ACD's application. As detailed in the Lips Declaration at § 58, hydrologic data have been added to the water quality data base on at least two occasions since the Division approved ACD's permit application. Indeed, one of the purposes of Petitioners' proposed discovery is to learn (1)

---

[1] The disingenuous character of ACD's argument is readily evident from the dead certainty that if the Division had denied ACD's permit application, ACD would have challenged that decision and would adamantly oppose any notion that the Division was entitled to summary judgment against ACD on technical issues prior to discovery and without an evidentiary hearing.

the contents of the permit application and water quality database as they stood on the date of permit approval, (2) the identity and source of any additions to either since that time, and (3) the rationale for supplementing the contents of either, to the extent that supplementation occurred. ACD is simply wrong in asserting that the contents of the permit application or the Division's data base are not subject to dispute.

Nor is ACD correct in claiming that "[d]etermination of whether the information present in the [permit application] is sufficient . . . is a legal determination amenable to summary decision." ACD's First Partial SJ Motion at 18. The question whether ACD's baseline hydrologic information is accurate and complete turns on a number of factual issues about which Petitioners seek discovery and are certainly not prepared to characterize as "undisputed." Among these issues are (1) whether ACD has identified and correctly characterized and mapped each water resource on the permit and adjacent area (an issue that Petitioners' requested site inspection would resolve), (2) whether, in light of ACD's repeated submission of internally inconsistent data (which Petitioners identified earlier in this memorandum and which is described specifically in the Lips Declaration), ACD accurately reported any of the baseline hydrologic data it provided to the Division and, if so, which of its data are accurate and which are not, and (3) ACD's justification, if any, for deviating from established norms for baseline hydrologic data collection.

Good cause for such discovery exists because, among other reasons, ACD's recitation of is baseline hydrologic information collection program for surface water and ground water, *Id.* at 18-21, is partially false. Despite ACD's assertion that "[a]t each location, the required five parameters were measured by laboratory or field methods on each occasion when a measurement was possible," at least seventy-three (73) of ACD's hydrologic data reports indicate that the company either (1) did not report flow at sites from which it reported water quality data on the same day or (2) did not

collect and process water quality samples from a monitoring site at which ACD's sampler reported flow.[2]

Just as troubling is ACD's misstatement of Petitioners' challenge to the completeness of the company's hydrologic data. Petitioners have made no "undisclosed assumption that a seasonal observation recording zero flow cannot meet the requirements of the Board's rules." *Id.* at 19. To the contrary, Petitioners regard accurate recordings of zero flow as competent data no less valid or important than valid records of actual flow rates and accurate water quality test results. ACD's argument based on this misstatement of Petitioners' position is a pointless waste of everyone's time, including the company's own.

Petitioners' challenge to the completeness of ACD's baseline hydrologic data is based in part on the principle that ACD, or any permit applicant, must collect baseline data in a manner that characterizes seasonal variation in peak and low flows. As Petitioners pointed out earlier in this memorandum, the Secretary has authoritatively rejected the notion that a permit may be approved where seasonal variation information is unavailable, stating instead that:

> Flow and seasonal variation information is required for all permit applications as prescribed by [SMCRA]. **If this information is unavailable, the applicant must obtain it.**

48 Fed. Reg. 43,969 col. 3 (emphasis supplied). Elaborating on the point, OSM has stated:

> Because seasonal phenomena are cyclic, **one sample from a given site is not adequate for accurately describing complete seasonal flow conditions.** The seasonal requirement may be satisfied by quality and quantity values **from samples collected during actual calendar seasons (spring, summer, fall and winter).**

---

[2] Additionally, in listing each parameter that permit applicants are obliged to test in surface water samples, ACD fails to include total suspended solids. The omission reflects ACD's actual failure to test a significant number of water samples for total suspended solids throughout its data collection program.

Permitting Hydrology at II-33-34 & II-38 (emphases supplied).

In keeping with the principles that the Secretary and OSM have announced, ACD was obligated to formulate its baseline hydrologic information collection program to ensure the recording of actual flow at each monitoring location, if and when flow occurred during the two-year monitoring period. Zero flow readings are valid, important data that establish part of the behavior of the streams in an arid environment. However, the Secretary and OSM have made clear that if there is flow at any time of the year, zero readings cannot be the only data for a particular monitoring site. Nor can a plethora of zero readings and one or two flow measurements (with corresponding water quality data) suffice to demonstrate seasonal variation over a two year period, absent evidence that there were no other flow events during the time in question.

The evidence in this proceeding will show that there has been substantial snow cover, and thus almost certainly a period of measurable snow melt runoff, during every year since the initial filing of ACD's permit application. Additionally, the evidence in this proceeding will show that numerous rainfall events occurred at the Alton weather station during the time in question which were of a magnitude sufficient to produce measurable runoff in the streams that ACD says it monitored in connection with the mining permit here in question. The record does not show a systematic effort on ACD's part to collect samples when the streams in question were flowing, and that is contrary to the authoritative interpretation of the applicable regulations by the Secretary and OSM.

Petitioners' evidence will show that ACD could have satisfied the actual requirements of the applicable regulations either by relying upon remote sensors or by directing its water sampler(s) to go to the site during times of snow melt and rainfall. Petitioners have requested leave to discover why ACD did not do so and why the Division failed to require it. Following such discovery,

Petitioners expect to produce evidence that ACD simply neglected to meet the minimum standards for collection of baseline hydrologic data and that the Division erred in approving ACD's substandard effort. Against the backdrop of the real dispute on this issue, summary judgment is wholly inappropriate.

3. ACD's "Big Picture" Argument

In an apparent attempt to escape the consequences of its failure to attend properly to all the details of formulating and implementing a competent baseline hydrologic data collection program, ACD attacks Petitioners for their supposed "decision to evaluate and attack the hydrologic baseline information in piecemeal fashion." ACD's First Partial SJ Motion at 21. ACD boasts that its hydrologist has instead based his judgments based on the big picture as he sees it. *Id.* Because ACD's approach ignores the need to first develop an accurate, complete, and reliable data base and **then** to develop a systemic understanding of the hydrogeology of an area by competently analyzing that data, ACD's criticism of Petitioners' methodology is wholly inconsistent with the text and structure of SMCRA's hydrologic protection program, as implemented by Utah's corresponding regulations, and is also incompatible with sound hydrogeology. Certainly, ACD's argument provides no basis on which to grant the company summary judgment.

The baseline hydrologic information regulations at issue require the detailed identification, monitoring, and characterization of **every** water resource in the permit and adjacent areas of ACD's proposed mining operation. Nothing in SMCRA or Utah's regulatory program supports the notion that a self-proclaimed "big picture" vision of an area's hydrologic system allows a permit applicant to overlook water resources in the permit or affected areas or neglect either to monitor those resources properly or to characterize them correctly. To the contrary, the regulatory program works by developing an understanding of the "hydrologic system" from the very same detail work of

identifying, monitoring, and characterizing water resources that ACD evidently holds in such great contempt.

Petitioners' focus on ACD's multitude of mistakes in collecting baseline hydrologic information is meant to ensure compliance with the primary criterion that Congress and the Utah Legislature have established for issuance of coal mine permits: an "accurate and complete" permit application. By proving the inaccuracy and incompleteness of ACD's application in this proceeding, Petitioners will establish the Division's error in granting ACD's permit no matter how impressive ACD's "big picture" evaluation of Coal Hollow hydrologic system may appear.

4. ACD's Specific Defenses of Its Baseline Program Do Not Establish That the Company is Entitled to Judgment as a Matter of Law

At the conclusion of ACD's memorandum in support of its motion for partial summary judgment on hydrologic issues, the company specifically addresses seventeen of the defects that Petitioners identified in their request for agency action. As explained below ACD's statements do nothing more than frame disputed issues of law and fact that cannot properly be resolved prior to conclusion of discovery or the taking of evidence at hearing.

ACD claims that five of Petitioners' issues involve allegedly missing baseline hydrologic data that ACD need not collect or present because, according to ACD, the locations at issue are beyond the area where effects from the mine are likely. *See* ACD's First Partial SJ Motion at 22-23 (Points 1-2), 24 (Point 6), 25 (Point 8), 26 (Point 10). This Board's scheduling order affords Petitioners the right to present evidence that determinations such as the one that ACD relies upon with respect to these five issues are in fact erroneous. As a result, ACD cannot credibly claim that its determination of no likely impact is invulnerable to dispute or that the governing law precludes Petitioners from offering evidence that ACD is in fact mistaken.

Even in advance of discovery, there is good cause to doubt ACD's determination. The record affords no basis for either Petitioners or this Board to be sure that ACD looked for seeps, springs, or other water resources in the areas in question. Indeed, Plate 1 of Appendix B to Appendix 7-1 of ACD's permit application indicates that ACD has not in fact surveyed the area for water resources that might be affected by the company's proposed mining operations. Just as importantly, if not more so, the Division has defined each of the areas at issue as part of the cumulative impact area of ACD's proposed mine. This designation carries with it the Division's finding that the hydrologic impacts of ACD's proposed mine will in fact extend to the areas at issue. *See* R645-100-200 (defining "cumulative impact area" to mean "the area, including the permit area, within which impacts resulting from the proposed operation may interact with the impacts of all anticipated mining on surface and groundwater systems").

Petitioners have requested discovery, including a site visit, aimed at developing evidence that additional water resources exist in the area in question and must be monitored before the Division may properly make a decision whether to approve ACD's permit application. Even absent such discovery, however, Petitioners are entitled to make a full record, through cross-examination of ACD's personnel and experts, concerning the company's apparent failure to survey the entire cumulative impact area of its proposed mine for the presence of water resources.

Petitioners have previously explained that they do not contend, as ACD erroneously presumes, that the company's records of no flow at various baseline monitoring points constitute invalid data. *See supra* at 22-24; Lips Declaration ¶¶ 38-56. Because that is not at all Petitioners' contention, ACD's argument on Point 3 is completely misguided. ACD has stated no argument for summary judgment on Petitioners' actual contention that the company must record flow in each stream when it occurs – a position fully supported by federal interpretation of SMCRA, its

implementing federal regulations, and the duties of state regulatory authorities. Thus, ACD is clearly not entitled to summary judgment on the issue as a matter of law.

Point 4 of ACD's rebuttal only underscores Petitioners' argument that ACD must collect flow data for streams on the permit and adjacent areas when they exhibit flow. ACD claims that someone has "observed" monitoring point SW-4 on 23 occasions since 1987 and recorded flow there only once. However, as mentioned earlier in this memorandum, Petitioners have evidence in hand that there has been substantial snowfall, plus numerous occasions of significant rainfall, at Alton weather station during the time period in question. *See* Lips Declaration at ¶¶ 47, 52. Against the backdrop of this evidence, there is serious question whether ACD actually designed its data collection program to avoid recording flow at SW-4 on most occasions when it did occur. Lips Declaration ¶¶ 138-141. Certainly the converse did not happen: ACD certainly did not design its data collection program to ensure recordation and sampling of all flow events. Moreover, ACD's failure to report total suspended solids for the one sample it obtained at SW-4 is entirely unexplained and means that there is absolutely no background data on that parameter for SW-4. Because there are numerous issues of fact concerning the accuracy and completeness of ACD's monitoring at SW-4, ACD is not entitled to summary judgment on Petitioners' challenge there.

ACD's Point 5 arguments are flawed for similar reasons. There is no explanation of why ACD did not obtain laboratory analysis for the occasion when it admittedly did not, nor is ACD's failure to obtain data during each snow melt runoff or significant precipitation event explained. Lips Declaration ¶ 156. ACD's quarrel with Petitioners over whether a significant portion of the mine disturbance will pass through monitoring station SW-6 is a classic issue for discovery and evidentiary hearing: after all, SW-6 is immediately downgradient of the planned location of one of ACD's effluent discharge outlets, which will drain an area of 256 acres, or approximately 0.4 square

mile. *See* Drawing 5-26 in ACD's permit application. Moreover, for its part, the Division has determined that SW-6 "is the best location to . . . determine any material damage to the hydrologic balance outside the permit area." *Division's Response to Request for Agency Action* at 9. Clearly, there is sharp dispute about significance of monitoring point SW-6 which provides ample "good cause" for Petitioners' pertinent discovery requests and warrants an eventual evidentiary hearing.

ACD's Point 7b argument, concerning adequate description of the geomorphology of Sink Valley Wash and Lower Robinson Creek, is yet another example of a genuine dispute of material fact between Petitioners and ACD.[3] The pertinent regulations, Utah Admin. Code R645-301-724.200 and -728.333, clearly require a description of the two streams and analysis in the determination of probable hydrologic consequences for ACD's mine of "[f]looding or streamflow alteration." Petitioners interpret the applicable regulations to require a description of the streams that is sufficient to support cogent analysis of their potential for flooding and streamflow alteration as a result of ACD's proposed mining operation. Petitioners contest the accuracy and completeness of the bare-bones effort included in ACD's permit application. As with other factual issues, Petitioners are entitled to discovery of material facts that ACD may have omitted or erred in presenting, and Petitioners are entitled to an evidentiary hearing at which they may cross-examine opposing witnesses on the accuracy and completeness of ACD's presentation on this issue. Clearly, however, ACD is not entitled to judgment as a matter of law based solely on the Division's acceptance of its defective efforts to comply with the governing regulations.

---

[3] Petitioners acknowledge that the applicable regulations do not include a requirement to specify the location of possible UPDES discharges in a permit application, as ACD argues in Point 7a.

ACD's Point 9 argument betrays a profound misunderstanding of the company's duties pursuant to Utah Admin. Code R645-301-724.100 in collecting and reporting "ground water information." Nothing in the cited regulation or any other part of the approved Utah state regulatory program authorizes a permit applicant to sample ground water that issues from a spring after it becomes surface water and flows approximately 1.5 miles downgradient from the point where the ground water discharges. Petitioners acknowledge the usefulness of data from SW-5 to characterize surface water in Lower Robinson Creek 1.5 miles downstream of the springs in question. However, Petitioners strongly dispute the validity of ACD's practice of reporting data obtained at SW-5 as measurements of the quantity or quality of ground water that discharges from springs in the bank of Lower Robinson Creek a mile and half upstream. Lips Declaration ¶¶ 105-108. Both the quantity and quality of the ground water in question certainly changes between the spring and SW-5 due to the chemistry of the intervening environment and the diversion of some of the flow back underground. In addition, any surface water from other sources and other ground water discharges that may join the flow of Lower Robinson Creek between the spring and SW-5 would impair or destroy the utility of measurements at SW-5 as surrogates for measurements at the spring itself. ACD's fundamental duty is to characterize the discharge from a spring as it discharges, not after it has flowed as surface water for more than mile. Even if there were not a genuine dispute of fact here – which there is – ACD is not entitled to judgment as a matter of law.

Petitioners also adamantly dispute ACD's assertion, in its Point 11 argument, that "the Dakota Formation contains no significant groundwater resources" and therefore need not have been monitored or characterized with respect to ground water. Despite its current statement concerning ground water in the Dakota Formation, ACD reported in its permit application that (1) ground water **does** flow from the Dakota Formation **at three seeps and springs south of the permit area** (PAP

pg 7-4), (2) water from at least one of these springs (SP-4) is used for at least stock watering (PAP Table 7-1 App. B App. 7-1), and (3) this same spring (SP-4) has exhibited flow during all 22 inspections – at rates of between 691 gallons per day and 1,382 gallons per day (average of 1,023 gallons per day). *See also* Lips Declaration ¶¶ 111-115. Because there is ground water flow through the Dakota Formation that supports uses in the adjacent area of ACD's proposed mine, it is irrelevant whether ACD or the Division deem the flow "significant" – the applicable rules require ACD to provide accurate and complete information on its quantity and quality under seasonal flow conditions. 48 Fed. Reg. at 43,967 col. 1 (ground-water baseline data collection must extend not just to "each significant water bearing stratum" – as the Secretary had initially proposed – but instead to "each water bearing stratum . . . to ensure the collection of all necessary information"). Petitioners certainly have good cause to conduct discovery on the issue of whether there exists "significant" ground water in the Dakota Formation and, if so, where the aquifer lies with respect to the coal seam that ACD proposes to remove. Ultimately, Petitioners are entitled to present their case on this issue at evidentiary hearing, in part through cross-examination of opposing witnesses, to insure that this Board compiles a complete record for administrative and judicial review of the issue.

Finally, ACD's argument on Points 12-16, all concerning the potential effect of mining operations on affected water rights, suffers from many of the same problems already discussed. First, it does no good for ACD to accuse Petitioners of misstating the number of affected water rights because that only frames a disputed issue of fact which further illustrates Petitioners' "good cause" for conducting discovery. In the context of the multitude of discrepancies and clear errors in ACD's baseline hydrologic data identified earlier in this memorandum, Petitioners are unwilling to accept at face value any of ACD's analyses of the extent of the likely hydrologic impact of its

proposed mine. Given the unreliable data that ACD has produced, Petitioners have ample "good cause" to conduct a site inspection and other discovery into ACD's data collection and analyses. Prior to that, ACD's assertions about the number of affected water rights, the correlation of proposed operational monitoring wells with aquifers monitored during the baseline phase, or the existence of a common aquifer supplying 18 springs said to be clustered "within a few yards of each other" cannot reasonably be characterized as undisputed. Petitioners are entitled to inspect and sample the land in question and to otherwise discover whether these aspects of ACD's permit application are "accurate and complete" as the governing regulations require.

5. ACD Has Failed to Provide Any Support Whatsoever for Its Request for Summary Judgment on Numerous Issues Other Than the Adequacy of Its Baseline Hydrologic Data

ACD has demanded summary judgment not only on the baseline hydrology issues discussed above, but also on Petitioners' claims concerning the inaccuracy of ACD's determination of probable hydrologic consequences, incomplete hydrologic monitoring plan, inaccurate or incomplete hydrologic operating plan, as well as the Division's unsupported determination that ACD's mine has been designed to prevent material damage to the hydrologic balance outside the permit area and the Division's unlawful waiver of stream buffer zone protection for Lower Robinson Creek. ACD has presented no argument in support of its demand for summary judgment on any of these separate claims in Petitioners' request for agency action. Consequently, because ACD has completely failed to demonstrate either the absence of any genuine dispute of material fact bearing on any of these claims, and because ACD has not shown that it is entitled to judgment as a matter of law on any of these issues, the Board should deny ACD's motion for summary judgment with respect to each of them.

E. Water Replacement Information

In light of the host of discrepancies and errors in ACD's baseline hydrologic data, ACD is not entitled to judgment as a matter of law prior to completion of Petitioner's requested discovery, including their requested inspection, and their expert's subsequent analysis of all baseline hydrologic data. ACD's claim to entitlement to judgment as a matter of law suffers further from the fact that its estimate of total replacement for potentially impacted state appropriated water rights apparently considered only those rights associated with alluvial ground water discharge area A and alluvial ground discharge area B (PAP pg 7-23), rather than **all** potentially impacted water rights in the permit and adjacent area as required by the Utah Coal Rules.

Moreover, as pointed out earlier in this memorandum, ACD reported in its permit application that potentially affected state water rights #85-458, #85-211, #85-459 and #85-393 exist in Lower Robinson Creek (PAP Table 7-12). ACD reported that these water rights are not associated with alluvial ground water discharge areas A or B (PAP Drawing 7-3 and Figure 16 App 7-1). Nonetheless, ACD has not reported the quantity of water that could be affected at these water right locations, and consequently ACD's estimate of a total replacement requirement of 52 gallons per minute does not encompass replacement of these rights.

Finally, although ACD claims that its calculation of the maximum water replacement requirement is based on a "worst-case scenario," it appears that ACD made its calculation on the basis of the **average** discharge of all state appropriated groundwater from groundwater discharge Area A (Drawing 7-3, Drawing 7-4), which is approximately 35 gallons per minute and the **average** discharge of all state appropriated groundwater from groundwater discharge area B (Drawing 7-4), which is approximately 17 gallons per minute. (PAP 7-23). Calculation of replacement quantities based on "averages" does not, as ACD claims, characterize the "worst-case scenario" for water

replacement. The worst-case scenario would instead be based on **maximum** flows for the springs, which is 47 gallons per minute for ground water discharge area A, and 121 gallons per minute for ground water discharge area B – a total of 168 gallons per minute, more than three times the 52 gallon per minute "maximum" reported by ACD.

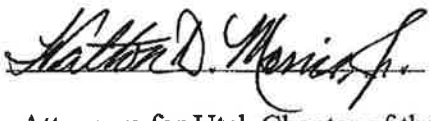
Confronted with ACD's recurring exercises in "fuzzy math" and the widespread discrepancies and apparent errors in its hydrologic baseline data, Petitioners have especially "good cause" to conduct discovery on this issue and to present to the Board or its hearing examiner for resolution at an evidentiary hearing all of the competent evidence bearing on the question of the accuracy and completeness of ACD's water replacement planning. At least in the interim, ACD is not entitled to summary judgment on the issue as a matter of law.

Conclusion

For the reasons stated above, Petitioners request that the Board deny ACD's motions for summary judgment.

Dated: January 25, 2010

Respectfully submitted,

By: 

Attorneys for Utah Chapter of the Sierra Club, *et al.*.

Stephen H.M. Bloch #7813
Tiffany 2Bartz #12324
SOUTHERN UTAH WILDERNESS ALLIANCE
425 East 100 South
Salt Lake City, UT 84111
Telephone: (801) 486-3161

Walton Morris *pro hac vice*
MORRIS LAW OFFICE, P.C.
1901 Pheasant Lane
Charlottesville, VA 22901
Telephone (434) 293-6616

Sharon Buccino *pro hac vice*
NATURAL RESOURCES DEFENSE COUNCIL
1200 New York Ave., NW, Suite 400
Washington, DC 20005
Telephone: (202) 289-6868

EXHIBIT 1

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

UTAH CHAPTER OF THE SIERRA CLUB, et al.,
Petitioners,

Docket No. 2009-019
Cause No. C/025/0005

DIVISION OF OIL, GAS AND MINING,
Respondent, and

ALTON COAL DEVELOPMENT, LLC, and KANE COUNTY, UTAH,
Intervenors-Respondents.

FIRST DECLARATION OF ELLIOTT W. LIPS

I, Elliott W. Lips, am of over twenty-one years of age, of sound mind, capable of making this declaration, and I am personally acquainted with the facts herein stated. If sworn as a witness, I could testify to the facts and opinions stated in this declaration. I declare under penalty of perjury that the foregoing is true and correct.

1. I am currently a principal engineering geologist of Great Basin Earth Science, Inc., located in Salt Lake City, Utah.

2. I am a Professional Geologist licensed in the State of Utah.

3. I am currently a member of the Morgan County Geologic Peer Review Board. The purpose of this Board is to review geologic reports for compliance with Morgan County ordinances and provide recommendations for building permit approval.

4. In 1983, I received my Bachelor's degree from Western State College of Colorado with a double major in geology and physics. In 1990, I received my Master's Degree in geology from Colorado State University.

5. Between 1983 and 1985, I was employed by the U.S. Geological Survey. During this time I participated in, and co-authored several studies relating to ground water movement and landslides, and surface water flooding. Most of the investigations were on sites of recent flooding and landslide activity in central Utah.

6. Between 1985 and 1997, I was employed as a full-time consulting engineering geologist. During this time I conducted approximately 15 investigations for ground water contamination from mines, mills, smelters, tailings ponds, and other industrial facilities in Utah, Colorado, Nevada, and

California. I participated in four separate seep and spring surveys for existing and proposed mines in Utah and Nevada, ranging in size between 2 and 50 square miles. I performed hydrology and hydraulics analyses and designed runoff control plans at numerous mine and industrial facilities in Utah and Nevada. I prepared geology, hydrology, and engineering components of mining and reclamation plans for 21 open-pit and underground mines, mill and concentrator sites, smelters, and tailings impoundments.

7. Between 1996 and 2006 I was an Adjunct Associate Professor in the Department of Geography at the University of Utah. I taught classes in geomorphology (including surface and ground water systems), environmental studies, climate change, and resource conservation and environmental management.

8. In the past 25 years, I have assisted in the preparation of geology, hydrology, and engineering portions of mining and reclamation plans at six coal mine facilities in Utah (Knight Mine, Star Point Mine, Soldier Canyon Mine, Sunnyside Mines, Horse Canyon Mine, and the Rilda Canyon Mine). I have also supported permitting activities at five non-coal mine facilities in Utah (Mercur Mine, Kennecott [mine, mill, smelter, and tailings pond], Carr Fork Mine, IS&R [mill site and tailings pond], and the Goldstrike Mine). In addition to permitting activities for the Division of Oil Gas and Mining, I have prepared permit applications for ground- and surface-water discharge in support of the NEPA and the Clean Water Act.

9. In the past 13 years, I have provided permitting expertise in the areas of geology and surface and ground water quality and quantity for proposed mines, tailings ponds, dams, highways, and river diversions. These projects have involved review of NEPA documents, 404 Permit Applications, FERC Applications, and UDOGM Mining and Reclamation Plans.

10. I have prepared reports and provided expert testimony twice in Federal Court and at several hearings before the Utah Board of Oil Gas and Mining.

11. I am familiar with the geology, and hydrology portions of the permit application package (PAP) submitted by Alton Coal Development LLC (ACD) for the Coal Hollow Mine. I have also reviewed significant portions of the engineering section of the PAP relating to hydrology issues.

12. I am familiar with the Utah Division of Oil, Gas and Mining (Division) application approval and decision documents (Technical Analysis [TA] and Cumulative Hydrologic Impact Assessment [CHIA]) dated October 15, 2009 for the Coal Hollow Mine.

13. I am familiar with the Division's Utah Coal Mining Water Quality Database (accessed electronically).

14. I am familiar with the State of Utah Coal Mining Rules (UT R645 Rules) and the Division's Coal Regulatory Program Guideline Number Tech-004.

15. I have reviewed ACD's January 15, 2010 "Respondent Alton Coal Development, LLC's Motion and Memorandum in Support of Partial Summary Judgment" and it's supporting Exhibits (ACD Summary Motion 1).

16. I have reviewed ACD's January 15, 2010 "Memorandum in Support of Motion for Partial Summary Judgment – Baseline Hydrology" and it's supporting Exhibits (ACD Summary Motion 2).

17. It is my understanding that the standard for granting summary judgment is "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law".[1]

18. I understand that Petitioners are, based in part on my requests and suggestions, currently seeking discovery of numerous material facts, the knowledge of which is essential to determining whether and to what extent, in my professional opinion, the "undisputed facts" that ACD asserts in their motions for summary judgment are genuinely undisputed.

19. Significant and important information necessary to develop an understanding and evaluation of the adequacy of the baseline data are not provided in the PAP, Division decision documents, and electronic database.

20. Notably absent are field notes, maps, and logs, and laboratory reports.

21. Review and examination of field notes and laboratory reports are necessary to identify, *inter alia*, persons making observations, dates and times of observations, persons collecting hydrologic baseline data, dates and times of data collection, methods of sampling and measurements, protocols for sampling, sample handling, and sample containers.

22. I understand that Petitioners have requested all other hydrologic data that ACD or the Division may have concerning the proposed permit and cumulative impact area.

23. It is not possible to fully evaluate whether there is a genuine dispute concerning ACD's stated "undisputed facts", until all documentation relating to the baseline hydrologic data are made available and reviewed.

24. It is not possible to fully evaluate whether there is a genuine dispute concerning ACD's stated "undisputed facts", until I have conducted a site visit and have the opportunity to inspect ACD's water-monitoring sites and evaluate their location, geologic occurrence, relationship to site topography, association, or lack of association, with other water resources, uses, or other information ACD reports for its monitoring stations.

25. To the extent that ACD's motions for summary judgment must be addressed without the benefit of additional information that Petitioners seek in their discovery requests, many of ACD's assertions of "undisputed material facts" are, to the contrary, very much in dispute as

[1] Utah Rules of Civil Procedure, Rule 56(c).

either incorrect, misleadingly incomplete, or I believe irrelevant in light of established standards for collection and evaluation of baseline hydrologic data in the process of coal mine permitting.

26. The Coal Rules require baseline information on seasonal quality and quantity of ground water, and baseline information on surface-water quality and quantity sufficient to demonstrate seasonal variation.

27. The hydrology of surface water and ground water vary seasonally in response to seasonal variability in climate.

28. According to the Western Region Climate Center[2] and the American Meteorological Society[3], seasons are defined as follows: Winter as December, January, and February; Spring as March, April, and May; Summer as June, July, and August; and Fall as September, October, and November.

29. With regard to seasonal characterization, OSM states "...The seasonal requirement may be satisfied by quality and quantity values from samples collected during actual calendar **seasons (spring, summer, fall and winter)**...." [emphasis added][4].

30. ACD's Summary Motion 2 contains numerous references to measurements collected at baseline water-monitoring sites in a "calendar quarter"[5].

31. ACD's analysis of the adequacy and completeness of its baseline data on the basis of "calendar quarters" is not supported by accepted and commonly used scientific delineations of seasons.

32. ACD's analysis of the adequacy and completeness of its baseline data on the basis of "calendar quarters" is inconsistent with the OSM guidelines for satisfaction of the seasonal variability requirement, which specifies quality and quantity samples collected during calendar seasons (spring, summer, fall and winter).

33. OSM states "... The intent of the regulation is to document a hydrologically sound seasonal database to be used to establish the baseline and to be used for future comparisons for the PHC and for the CHIA development..."[6]

---

[2] Western Regional Climate Center, Desert Research Institute and National Oceanic and Atmospheric Administration, Period of Record General Climate Summary – Precipitation, Alton, Utah (420086), http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ut0086

[3] Trenberth, K.E., 1983, What are the seasons?: Bulletin of the American Meteorological Society, Vol. 64, Issue 11, pgs 1276-1282.

[4] Permitting Hydrology, A Technical Reference Document for Determination of Probable Hydrologic Consequences (PHC) and Cumulative Hydrologic Impact Assessments (CHIA), Baseline Data, Prepared by the Office of Surface Mining, May, 2002, pgs. II-32 – II-33 and II-38.

[5] ACD's Statement of Undisputed Material Facts, Numbers 3, 5, 7, 9, 11, 13, 15, 17, 21, 23, 25, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, and 60.

[6] Permitting Hydrology, A Technical Reference Document for Determination of Probable Hydrologic Consequences (PHC) and Cumulative Hydrologic Impact Assessments (CHIA), Baseline Data, Prepared by the Office of Surface Mining, May, 2002, pgs. II-34 and II-38.

34. ACD's baseline data do not document a hydrologically sound seasonal data base, and thus do not establish baseline for the PHC or CHIA, nor do they allow for comparison to seasonal hydrologic measurements collected during the operation of the proposed mine in order to assess impacts.

35. ACD's Summary Motion 2 contains numerous admissions that data were not collected from several sites "when the site was inaccessible"[7].

36. The PAP, Division's decision documents, and electronic database contain no information on any program that ACD developed and implemented to collect baseline hydrologic data when sites were temporarily inaccessible.

37. Notably absent from the record is information on why the site was inaccessible, what means were attempted to access the site, number of attempts that were made to access the site, or what measures, if any, ACD took to monitor the site immediately after it became accessible again.

38. ACD's Summary Motion 2 contains numerous references to several surface-water monitoring sites where a flow measurement of zero was recorded when flowing water was not present.[8]

39. ACD reports that many of the streams in the permit and adjacent area are intermittent or ephemeral streams and only flow in response to precipitation or snowmelt.

40. The PAP, Division's decision documents, and electronic database contain no information on any program that ACD developed and implemented to collect baseline hydrologic data on high flow or mean flow for the intermittent or ephemeral streams.

41. Infrequent and sporadic observations of no flow conditions do not establish baseline conditions on seasonal variability; they are merely snap shots in time and only for a portion of the hydrologic regime.

42. OSM[9] states "... Water-quality sampling frequency should be adjusted so that annual discharge cycles of high, normal, and low flows are sampled ..." (pg III-2); "... The regulations also require a determination of the operation's impact on flooding and streamflow alteration. Therefore, information on floodflows is necessary..." (pg III-13); and "...in order to adequately determine the baseline sediment concentrations, it is necessary to obtain water samples and corresponding waterflow rates during stormflows, as well as during low-flow periods.." (pg III-13).

43. ACD's permit application does not contain complete and adequate baseline information on "high flows", "floodflows", or "stormflows".

---

[7] ACD Statement of Undisputed Material Facts, Numbers 3, 7, 11, 13, 25, 38, 40, 42, 44, 48, 52, 54, and 56.
[8] ACD's Statement of Undisputed Material Facts, Numbers 44, 46, 48, 50, 52, 54, and 56.
[9] Draft Guidelines for Preparation of a Probable hydrologic Consequences Determination (PHC), Office of Surface Mining, December, 1985.

44. In my opinion, a scientifically complete and accurate baseline characterization, and one that is consistent with OSM guidelines, must include information on times when there is no flow, and measurements of flow rates when there is flow.

45. ACD could have collected flow measurements and samples for water quality analysis during times when the intermittent and ephemeral streams were flowing.

46. The record contains no information that ACD structured its baseline monitoring program to ensure that flow rates and water quality samples were collected when snow-melt runoff occurred.

47. According to National Climate Data Center, snow fall totals at the Alton climate station were: 11.7 feet in the winter of 2004-2005; 4.5 feet in the winter of 2005-2006; 3.3 feet in the winter of 2006-2007; 8.4 feet in the winter of 2007-2008; 6.6 feet in the winter of 2008-2009.

48. Because the proposed Coal Hollow Mine is only approximately 4 miles from this climate station, and at a similar elevation, similar snow fall almost certainly occurred at the mine site.

49. Furthermore, snow-melt runoff through the proposed mine site would include melting of snow from higher elevations in the drainage basins to the north and east, which would have almost certainly had greater winter snow fall than recorded at the Alton weather station.

50. The record does not indicate that ACD recorded flow rates or collected samples during the high flow associated with snow-melt runoff.

51. The record contains no information that ACD structured its baseline monitoring program to ensure that flow rates and water quality samples were collected during, or immediately following summer precipitation events.

52. I have calculated that during ACD's baseline monitoring period, at least seven precipitation events occurred which would have probably resulted in runoff from Lower Robinson Creek and other ephemeral streams in the permit and adjacent area.[10]

53. The record does not indicate that ACD recorded flow rates or collected samples during these flood flows or storm flows.

54. ACD's permit application and the Division's decision documents do not explain why ACD did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams: equipment that records flow depth and collects samples without requiring a person on-site during the flow event.

---

[10] I calculated runoff in Lower Robinson Creek (LRC) using the SCS Curve Number Method (TR-55) and the data on basin size, curve number, and time of concentration provided in ACD's permit application. Based on the same methodology used by ACD, and ACD's data for LRC, I conducted a sensitivity analysis to determine what precipitation would be necessary to generate flow in LRC. According to the National Climate Data Center, this threshold rainfall depth of 0.75 inch occurred seven times in a 24-hr period between August 2005 and August 2007 at Alton.

55. Simple, inexpensive, reliable, and easily installed monitoring and sampling equipment such as crest stage gages and single stage samplers are used extensively by government and industry hydrologists.[11]

56. The Division has required the use of crest stage gages and single stage samplers in ephemeral streams for the collection of seasonal baseline data in the process of coal mine permitting.

57. My analysis of the completeness of the baseline data for the proposed mine is based on examination of data contained in the DOGM electronic database on numerous occasions, most recently on January 19, 2010.

58. On at least two occasions data have been added to the electronic database since the Division approved the permit on October 15, 2009: (a) on November 16, 2009, data that were collected between January and June, 2009 were added to the database, and (b) sometime between November 16, 2009 and January 5, 2010 data that was collected between July and September, 2009 were added to the database.

59. ACD's Motion 2 presents 67 "statements of undisputed material facts"; each of these is addressed below and referenced to as ACD #1 through ACD #67.

60. As Petitioner's consultant on hydrogeology issues, I dispute ACD #1 as misleadingly incomplete because (a) Permit Application Drawing 7-1 and the electronic database indicate that there are more than 27 seep and spring locations within the permit area and cumulative impact area, and (b) as indicated in the electronic database, ADC has reported complete baseline water quality data on only 9 of the 30 seep or spring locations shown on Drawing 7-1.

---

[11] See: 1) Waltemeyer, S.D., and Moore, S.J., 2005, Automated crest-stage applications in New Mexico: New Mexico Water Research Symposium - August 16, 2005; 2) In-Situ Inc., 2009, Automatic crest stage gages with continuous monitoring instruments: Technical Note, Crest Stage Gages: In-Situ Inc., Fort Collins, Colorado; 3) Boning, C.W., 1988, Guidelines of the operation of crest-stage program, Programs and Plans: Office of Surface Water Technology Memorandum No. 88.07; 4) U.S. Geological Survey, 2005, Automated crest-stage gage application in ephemeral streams in New Mexico: U.S. Department of the Interior, U.S. Geological Survey, Fact Sheet 2005-3136; 5) U.S. Geological Survey, 2000, Comparison of Water-quality samples collected by siphon samples and automatic samplers in Wisconsin: Department of the Interior, U.S. Geological Survey, USGS Fact Sheet FS-067-00; 6) Diehl, T.H., 2008, A modified siphon sampler for shallow water: Department of the Interior, U.S. Geological Survey, Scientific Investigations Report 2007-5282; 7) Lane, S.L., Flanagan, S., and Wilde, F.D., 2003, Selection of equipment for water sampling, Chapter A2, Book 9, National Field Manual for the Collection of Water-Quality Data: U.S. Geological Survey, Techniques of Water Resources Investigations; 8) Rantz, S.E., and others, 2005, Measurement and computation of streamflow, Volume 1. Measurement of stage and discharge: U.S. Geological Survey, Water Supply Paper 2175; 9) Benson, M.A., and Dalrymple, T., 1984, General field and office procedures for indirect discharge measurements, Chapter A1, in, Techniques of Water-Resource Investigation: U.S. Geological Survey; and 10) Buchanan, T.J. and Somers, W.P., 1982, Stage measurement at gaging stations, Chapter A7, in, Techniques of Water-Resource Investigation: U.S. Geological Survey.

61. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #2 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

62. As Petitioner's consultant on hydrogeology issues, I dispute ACD #3 because, in addition to the two times ACD reports that the site was inaccessible, ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Fall, 2008; Summer, 2009.

63. In addition, I dispute ACD #3 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

64. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #4 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, (b) my analysis of all baseline data may lead to a dispute as to whether the information is incomplete, and (c) my analysis of all baseline data may lead to a dispute as to whether this spring has a discharge of about 1 gallon per minute (gpm) and displays little seasonal variability in flow as reported by ACD.

65. As Petitioner's consultant on hydrogeology issues, I dispute ACD #5 because ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Fall, 2008; Summer, 2009.

66. In addition, I dispute ACD #5 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

67. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #6 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

68. As Petitioner's consultant on hydrogeology issues, I dispute ACD #7 because, in addition to the two times ACD reports that the site was inaccessible, ACD has not reported either flow or

water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Fall, 2008; Summer, 2009.

69. In addition, I dispute ACD #7 because (a) ACD reports water quality parameters for December 30, 2008 and yet ACD also reports no flow data for that date, and (b) this internal inconsistency renders the data unreliable.

70. In addition, I dispute ACD #7 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

71. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #8 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

72. As Petitioner's consultant on hydrogeology issues, I dispute ACD #9 because ACD has not reported either flow or water quality parameters for the following seasons: Summer, 2005; Winter, 2006; Summer, 2006; Fall, 2006; Fall, 2008; and Summer, 2009.

73. In addition, I dispute ACD #9 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

74. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #10 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

75. As Petitioner's consultant on hydrogeology issues, I dispute ACD #11 because, in addition to the two times ACD reports that the site was inaccessible, (a) ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Fall, 2008; and Summer, 2009, and (b) ACD has reported laboratory water quality parameters more than four times.

76. In addition, I dispute ACD #11 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

77. In addition, I dispute ACD #11 as misleadingly incomplete because ACD provides no explanation for why this site (SP-14) is considered redundant for monitoring purposes with SP-8 which is located about 0.3 miles south of SP-14

78. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #12 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

79. As Petitioner's consultant on hydrogeology issues, I dispute ACD #13 because, in addition to the two times ACD reports that the site was inaccessible, ACD has not reported either flow or water quality parameters for the following seasons: Summer, 2006; Fall, 2006; Fall, 2007; Fall, 2008; Winter, 2009; and Summer, 2009.

80. In addition, I dispute ACD #13 because (a) ACD reports water quality parameters for December 30, 2007 and yet ACD also reports no flow data for that date, and (b) this internal inconsistency renders the data unreliable.

81. In addition, I dispute ACD #13 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

82. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #14 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

83. As Petitioner's consultant on hydrogeology issues, I dispute ACD #15 because ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Fall, 2008; and Summer, 2009.

84. In addition, I dispute ACD #15 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

85. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #16 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association,

with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

86. As Petitioner's consultant on hydrogeology issues, I dispute ACD #17 because ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Fall, 2008; and Summer, 2009.

87. In addition, I dispute ACD #17 because (a) ACD reports water quality parameters for June 22, 2007 and yet ACD also reports no flow data for that date, and (b) this internal inconsistency renders the data unreliable.

88. In addition, I dispute ACD #17 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

89. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether all of ACD #18 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for these monitoring stations, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

90. As Petitioner's consultant on hydrogeology issues, I dispute ACD #18 because ACD has not reported baseline data at SP-8, SP-16, and SP-40 for numerous seasons (see dispute to ACD #9, ACD #13, and ACD #17 above).

91. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #19 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for these additional seeps and springs, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

92. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #20 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

93. As Petitioner's consultant on hydrogeology issues, I dispute ACD #21 because (a) ACD has not reported either depth or water quality parameters for the following seasons: Winter,

2006; Summer, 2006; Fall, 2008; and Summer, 2009, and (b) ACD has not reported laboratory water quality parameters for Fall, 2005.

94. In addition, I dispute ACD #21 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

95. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #22 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

96. As Petitioner's consultant on hydrogeology issues, I dispute ACD #23 because ACD has not reported either depth or water quality parameters for the following seasons: Summer, 2005; Summer, 2006; Fall, 2008; Winter, 2009; and Summer, 2009.

97. In addition, I dispute ACD #23 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

98. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #24 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

99. As Petitioner's consultant on hydrogeology issues, I dispute ACD #25 because, in addition to the two times ACD reports that the site was inaccessible, ACD has not reported either depth or water quality parameters for the following seasons: Spring, 2008; Fall, 2008; Winter, 2009; and Summer, 2009.

100. In addition, I dispute ACD #25 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

101. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #26 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for these additional wells, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

102. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #27 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for the ground water systems, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

103. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #28 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for the ground water systems, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

104. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #29 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for the ground water systems, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

105. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether all of ACD #30 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for the ground water systems, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

106. As Petitioner's consultant on hydrogeology issues, I dispute ACD #30 because (a) ACD reports that ground water does over top the ridge of Tropic Shale (PAP pg 7-6), (b) ACD reports that seepage does occur in the banks of Lower Robinson Creek from the alluvial ground water west of the ridge of Tropic Shale (PAP pg 7-6), and (c) ACD reports the seepage of alluvial water in the Lower Robinson Creek channel is typically about 5 to 10 gpm (PAP pg 7-6).

107. In addition, I dispute ACD #30 as misleadingly incomplete because (a) ACD reports that the seepage of alluvial ground water into Lower Robinson Creek channel occurs in the southeast corner of Section 19, T39S, R5W is monitored at SW-5 (PAP 7-6), which is located about 1.5 miles west of the reported seepage, (b) ACD does not provide flow or water quality data from the

seeps and springs, (c) ADC does not provide information on the relation between the flow of water at the seeps and the flow of water in the channel at SW-5, 1.5 miles away, and (d) ACD does not provide information on the relation between water quality at the seeps and water quality as measured in the channel at SW-5, 1.5 miles away.

108. In addition, I dispute ACD #30 as misleadingly incomplete and irrelevant because (a) even if ACD could reasonably conclude that the flow of alluvial ground water into Lower Robinson Creek was not significant, ACD's acknowledgement that it is a water-bearing strata requires reporting of baseline information, (b) OSM[12] states "... ground-water quantity information must include 'approximate rates of discharge or usage and depth to the water in each water bearing stratum' rather than 'discharge rate and depth to water in each **significant** water-bearing strata'..." [emphasis added], and (c) OSM specifically removed the word "significant" and states "... baseline information is mandated for all water bearing strata..." (OSM[13]).

109. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether all of ACD #31 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for the ground water systems, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

110. As Petitioner's consultant on hydrogeology issues, I dispute ACD #31 as misleadingly incomplete and irrelevant because, (a) even if ACD does conclude that no significant source or flow of ground water was observed in the Tropic Shale, their acknowledgement that it is a water-bearing strata requires reporting of baseline information, (b) OSM[14] states "... ground-water quantity information must include 'approximate rates of discharge or usage and depth to the water in each water bearing stratum' rather than 'discharge rate and depth to water in each **significant** water-bearing strata'..." [emphasis added], and (c) OSM specifically removed the word "significant" and states "... baseline information is mandated for all water bearing strata..." (OSM[15]).

111. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether all of ACD #32 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the locations, geologic occurrence, association, or lack of association, with other water resources, or other information ACD reports for the ground water in the Dakota

---

[12] Federal Register / Vol. 48, No. 187 / Monday, September 26, 1983 / Rules and Regulations: Surface Coal Mining and Reclamation Operations; Permanent Regulatory Program Hydrology Permitting and Performance Satndards; Geology Permitting, Final rules (43967).
[13] Ibid (43968)
[14] Federal Register / Vol. 48, No. 187 / Monday, September 26, 1983 / Rules and Regulations: Surface Coal Mining and Reclamation Operations; Permanent Regulatory Program Hydrology Permitting and Performance Satndards; Geology Permitting, Final rules (43967).
[15] Ibid (43968)

Sandstone, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

112. As Petitioner's consultant on hydrogeology issues, I dispute ACD #32 as misleadingly incomplete because (a) ACD reports that ground water does flow from the Dakota Formation at three seeps and springs south of the permit area (PAP pg 7-4), (b) ACD reports that water from at least one of these springs (SP-4) is used for at least stock watering (PAP Table 7-1 App. B App. 7-1), (c) ACD reports that one of these springs (SP-4) has had flow on 22 of 22 inspections and flows between 691 gallons per day and 1,382 gallons per day (average of 1,023 gallons per day), which is, in my opinion, a significant quantity of water, and (d) because the Dakota Formation does store and transmit water in sufficient quantities for a specific use, it is an aquifer according to the Utah Coal Rules.

113. In addition, I dispute ACD #32 as misleadingly incomplete because a published report by the Utah Geological Survey (and included in the PAP as App 6-3) reports, (a) "... The potential exists for ground water in sandstone aquifers in the subsurface Dakota Formation..."[16], (b) that the Dakota Formation is approximately 275 feet thick[17], and (c) The Dakota consists of interbedded sandstone, mudstone, carbonaceous mudstone, and coal, and some bentonite, with sandstone dominating the total thickness at almost a 2:1 ratio[18].

114. In addition, I dispute ACD #32 as misleadingly incomplete because, even though the Dakota Formation is an aquifer, (a) ACD does not provide any information on the Dakota Formation further than 7.0 feet below the coal seam to be mined (depth reached in ACD's exploratory drill holes varied between 2.0 and 7.0 feet below the coal seam to be mined [PAP App. 6-1]), (b) OSM[19] has specifically addressed the depth below the coal seam for which the applicant has a responsibility to determine the presence or absence of an aquifer and for assessing its potential for being adversely impacted by the mining activity, and (c) ACD does not provide adequate information on the presence or absence of an aquifer in the Dakota Formation below the coal seam to be mined, or an assessment of its potential to be adversely impacted by the mining activity as specified by OSM.

115. In addition, I dispute ACD #32 as misleadingly incomplete and irrelevant because, (a) even if ACD could reasonably conclude no significant source or flow of ground water was observed in the Dakota Sandstone, ACD's acknowledgement that it is a water-bearing strata

---

[16] Tilton, T.L., 2001, Geologic map of the Alton Quadrangle, Kane County, Utah: Utah Geological Survey miscellaneous Publication 01-04, pg. 14.

[17] Ibid (pg. 4)

[18] Ibid (pg. 5)

[19] "... Commonly, the stratum immediately below a coal seam consists of very fine grained, sedimentary rock which has a low transmissivity or does not have the hydrologic properties necessary to transmit or yield ground water. This stratum may range in thickness from less than 2 feet to several feet and has been variously referred to locally as "underclay" of "fire clay". Although this "underclay" or "fire clay" stratum is generally not considered an aquifer, the next lowest (i.e., underlying) stratum commonly has improved hydraulic capabilities and may be an aquifer. Depending upon site geology and operating procedures, such an aquifer may have the potential of being adversely impacted by surface coal mining activities such as blasting, which may fracture any stratum between this aquifer and the coal seam [44 FR 15031]. Therefore, the applicant has the responsibilities for determining the presence or absence of such an aquifer below the coal seam "underclay" and for assessing its potential for being adversely impacted by the mining activity..." (Ibid 43961-43962)

requires reporting of baseline information, (b) OSM[20] states "... ground-water quantity information must include 'approximate rates of discharge or usage and depth to the water in each water bearing stratum' rather than 'discharge rate and depth to water in each **significant** water-bearing strata'..." [emphasis added], and (c) OSM specifically removed the word "significant" and states "... baseline information is mandated for all water bearing strata..." (OSM[21]).

116. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #33 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the surface drainage characterization, or other information ACD reports for surface waters, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

117. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #34 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the surface drainage characterization, or other information ACD reports for surface waters, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

118. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #35 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the surface drainage characterization, or other information ACD reports for surface waters, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

119. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #36 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the surface drainage characterization, or other information ACD reports for surface waters, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

120. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #37 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site

---

[20] Federal Register / Vol. 48, No. 187 / Monday, September 26, 1983 / Rules and Regulations: Surface Coal Mining and Reclamation Operations; Permanent Regulatory Program Hydrology Permitting and Performance Satndards; Geology Permitting, Final rules (43967).

[21] Ibid (43968)

may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete, and (c) my analysis of all baseline data may lead to a dispute as to whether flow at this monitoring site ranges from 10 cubic feet per second (cfs) or less during the springtime runoff period to 1 cfs or less during the summertime as reported by ACD.

121. As Petitioner's consultant on hydrogeology issues, I dispute ACD #38 because, in addition to the one time ACD reports that the site was inaccessible, ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Spring, 2008; Fall, 2008; and Summer, 2009.

122. In addition, I dispute ACD #38 because (a) ACD reports flow and water quality parameters for June 22, 2007 and for August 21, 2008 and yet ACD also reports that the site was inaccessible on those dates, and (b) these internal inconsistencies render the data unreliable.

123. In addition, I dispute ACD #38 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

124. In addition, I dispute ACD #38 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

125. In addition, I dispute ACD # 38 as misleadingly incomplete because ACD does not report that any of the flows measured provide baseline information on high flows, flood flows, or storm flows.

126. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #39 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

127. As Petitioner's consultant on hydrogeology issues, I dispute ACD #40 because, in addition to the times ACD reports that the site was inaccessible, (a) ACD has not reported either flow or water quality parameters for the following seasons: Summer, 2005; Winter, 2006;

Summer, 2006; Fall, 2008; and Summer, 2009, and (b) ACD has not reported all water quality parameters for Spring, 2005; Fall, 2005.

128. In addition, I dispute ACD #40 because (a) ACD reports pH for September 29, 2009 and yet ACD also reports that there was no flow at this site on that date, and (b) this internal inconsistency renders the data unreliable.

129. In addition, I dispute ACD #40 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

130. In addition, I dispute ACD #40 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

131. In addition, I dispute ACD # 40 as misleadingly incomplete because ACD does not report that any of the flows measured provide baseline information on high flows, flood flows, or storm flows.

132. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #41 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

133. As Petitioner's consultant on hydrogeology issues, I dispute ACD #42 because, in addition to the one time ACD reports that the site was inaccessible, ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Fall, 2008; and Summer, 2009.

134. In addition, I dispute ACD #42 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

135. In addition, I dispute ACD #42 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and

water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

136. In addition, I dispute ACD # 42 as misleadingly incomplete because ACD does not report that any of the flows measured provide baseline information on high flows, flood flows, or storm flows.

137. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #43 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

138. As Petitioner's consultant on hydrogeology issues, I dispute ACD #44 because, in addition to the two times ACD reports that the site was inaccessible, (a) ACD has not reported either flow or water quality parameters for the following seasons: Summer, 2005; Winter, 2006; Summer, 2006; Winter, 2008; Fall, 2008; and Summer, 2009, and (b) ACD has not reported all water quality parameters for Spring, 2005.

139. In addition, I dispute ACD #44 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

140. In addition, I dispute ACD #44 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

141. In addition, I dispute ACD # 44 as misleadingly incomplete because ACD does not report that the one flow measured provides baseline information on high flows, flood flows, or storm flows.

142. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #45 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of

Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

143. As Petitioner's consultant on hydrogeology issues, I dispute ACD #46 because (a) ACD has not reported either flow or water quality parameters for the following seasons: Summer, 2005; Winter, 2006; Summer, 2006; Fall, 2006; Spring, 2007; Fall, 2008; and Summer, 2009, and (b) ACD has not reported all water quality parameters for Spring, 2005.

144. In addition, I dispute ACD #46 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

145. In addition, I dispute ACD #46 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

146. In addition, I dispute ACD # 46 as misleadingly incomplete because ACD does not report that any of the flows measured provide baseline information on high flows, flood flows, or storm flows.

147. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #47 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete, and (c) my analysis of all baseline data may lead to a dispute as to whether flow at this monitoring site is derived from the seepage of alluvial ground water into the Lower Robinson Creek stream channel between monitoring sites SW-101 and SW-5 as reported by ACD.

148. As Petitioner's consultant on hydrogeology issues, I dispute ACD #48 because, in addition to the three times ACD reports that the site was inaccessible, (a) ACD has not reported either flow or water quality parameters for the following seasons: Summer, 2005; Fall, 2005; Winter, 2006; Summer, 2006; Fall, 2008; and Summer, 2009, and (b) ACD has not reported all water quality parameters for Spring, 2005.

149. In addition, I dispute (a) ACD #48 because ACD reports flow and water quality parameters for September 29, 2007 and for August 21, 2008 and yet ACD also reports that the site was inaccessible on those dates, and (b) these internal inconsistencies render the data unreliable.

150. In addition, I dispute ACD #48 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

151. In addition, I dispute ACD #48 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

152. In addition, I dispute ACD # 48 as misleadingly incomplete because ACD does not report that any of the flows measured provides baseline information on high flows, flood flows, or storm flows.

153. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #49 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

154. As Petitioner's consultant on hydrogeology issues, I dispute ACD #50 because ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Fall, 2008; and Summer, 2009, and (b) ACD has not reported all water quality parameters for Spring, 2006.

155. In addition, I dispute ACD #50 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

156. In addition, I dispute ACD #50 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the

Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

157. In addition, I dispute ACD # 50 as misleadingly incomplete because ACD does not report that any of the flows measured provides baseline information on high flows, flood flows, or storm flows.

158. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #51 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

159. As Petitioner's consultant on hydrogeology issues, I dispute ACD #52 because, in addition to the two times ACD reports that the site was inaccessible, ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2008; Fall, 2008; and Summer, 2009.

160. In addition, I dispute ACD #52 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

161. In addition, I dispute ACD #52 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

162. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #53 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

163. As Petitioner's consultant on hydrogeology issues, I dispute ACD #54 because, in addition to the three times ACD reports that the site was inaccessible, (a) ACD has not reported

either flow or water quality parameters for the following seasons: Summer, 2006; Fall, 2006; Winter, 2008; and Summer, 2009, and (b) ACD has not reported water quality parameters for Fall, 2008.

164. In addition, I dispute ACD #54 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

165. In addition, I dispute ACD #54 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

166. In addition, I dispute ACD # 54 as misleadingly incomplete because ACD does not report that any of the flows measured provides baseline information on high flows, flood flows, or storm flows.

167. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #55 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

168. As Petitioner's consultant on hydrogeology issues, I dispute ACD #56 because, in addition to the three times ACD reports that the site was inaccessible, ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Summer, 2006; Winter, 2008; Fall, 2008; and Summer, 2009.

169. In addition, I dispute ACD #56 as misleadingly incomplete because (a) ACD does not explain why the site was inaccessible when ACD claims it was, or what measures, if any, ACD took to monitor the site immediately after it became accessible again, and (b) ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

170. In addition, I dispute ACD #56 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in

remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

171. In addition, I dispute ACD # 56 as misleadingly incomplete because ACD does not report that any of the flows measured provides baseline information on high flows, flood flows, or storm flows.

172. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #57 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

173. As Petitioner's consultant on hydrogeology issues, I dispute ACD #58 because (a) ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Fall, 2008; and Summer, 2009, and (b) ACD has not reported all water quality parameters for Spring, 2006.

174. In addition, I dispute ACD #58 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

175. In addition, I dispute ACD #58 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

176. In addition, I dispute ACD # 58 as misleadingly incomplete because ACD does not report that any of the flows measured provides baseline information on high flows, flood flows, or storm flows.

177. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether ACD #59 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for this monitoring station, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

178. As Petitioner's consultant on hydrogeology issues, I dispute ACD #60 because ACD has not reported either flow or water quality parameters for the following seasons: Winter, 2006; Fall, 2008; and Summer, 2009.

179. In addition, I dispute ACD #60 as misleadingly incomplete because ACD has not provided the laboratory reports or field notes for any of the monitoring events that it reports.

180. In addition, I dispute ACD #60 as misleadingly incomplete because (a) ACD does not explain why it did not structure its baseline monitoring program to ensure that flow rates and water quality samples were collected (i) during, or immediately following summer precipitation events, and (ii) during snow-melt runoff events, and (b) ACD does not explain why it did not employ the standard scientific practice for measuring flow and collecting water samples in remote and/or ephemeral streams (crest stage gages and single stage samplers) even though the Division has required the use of this sampling equipment for the collection of baseline data in permitting coal mines.

181. In addition, I dispute ACD # 60 as misleadingly incomplete because ACD does not report that any of the flows measured provides baseline information on high flows, flood flows, or storm flows.

182. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether all of ACD #61 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because (a) my inspection of the site may lead to a dispute over the location, proximity to other surface water features, association, or lack of association, with other water resources, or other information ACD reports for these monitoring stations, and (b) my analysis of all baseline data may lead to a dispute as to whether the information is complete.

183. As Petitioner's consultant on hydrogeology issues, I dispute ACD #61 as incorrect because (a) ACD reports that water rights that could be impacted by the proposed mining include rights that are exclusively associated with monitoring locations SP-19, SP-20, SP-22, and SP-23 (PAP Table 7-12), and (b) SP-19, SP-20, SP-22, and SP-23 are not associated with any of the baseline locations ACD claims are "identified above" in its motion.

184. In addition, I dispute ACD #61 as incorrect because (a) ACD does not provide complete water quality information for any season for SP-19, SP-22, and SP-23, and (b) ACD does not provide complete seasonal baseline information for SP-20.

185. In addition, I reiterate my disputes to the baseline monitoring sites referred to in ACD #61[22].

[22] See dispute to ACD #6-17, ACD #47-48, and ACD #57-58.

186. As Petitioner's consultant on hydrogeology issues, I do not dispute that the Division made the determinations and findings described in ACD #62 – ACD #67. However, prior to the completion of Petitioner's requested discovery, including the requested site inspection, and my subsequent analysis of all hydrologic and geologic baseline information, I am unable to determine fully to what extent the Division's determinations and findings are incorrect, unsupported by ACD's permit application, in conflict with the Utah Coal Rules, or unsupported by sound scientific analyses. This is because discovery may lead to a dispute as to (a) whether the information the Division reviewed is accurate and complete, or (b) the validity or accuracy of the Division's determinations and findings. None the less, for reasons that I have described in previous paragraphs of this declaration, the Division's determinations and findings are, I believe, in many currently identified respects in conflict with the Utah Coal Rules because they deemed acceptable the PAP, which is incomplete according to the permitting rules, or is unsupported by sound scientific practices and analyses.

187. The follow responses are to ACD's "statement of undisputed facts" with respect to the water replacement issue.

188. As Petitioner's consultant on hydrogeology issues, I am unable to determine whether all of ACD #23 is incorrect, misleadingly incomplete, or irrelevant prior to the completion of Petitioner's requested discovery, including the requested inspection, and my subsequent analysis of all baseline hydrologic data. This information is required because my analysis of all baseline data may lead to a dispute as to whether the information is complete.

189. As Petitioner's consultant on hydrogeology issues, I dispute ACD #23 as misleadingly incomplete because ACD's estimate of total replacement for potentially impacted state appropriated water rights only considered those rights associated with alluvial ground water discharge area A and alluvial ground discharge area B (PAP pg 7-23) and not all potentially impacted water rights in the permit and adjacent area as required by the Utah Coal Rules.

190. In addition, I dispute ACD #23 because (a) ACD reports potentially impacted state water rights #85-458, #85-211, #85-459 and #85-393 exist in Lower Robinson Creek (PAP Table 7-12), (b) ACD reports that these water rights are not associated with alluvial ground water discharge areas A or B (PAP Drawing 7-3 and Figure 16 App 7-1), (b) ACD does not report the quantity of water that could be impacted at these water right locations, and (c) ACD's estimate of a total replacement requirement of 52 gpm does not include replacement of these rights.

191. In addition, I dispute ACD #23 because (a) ACD reports that the quantity of water for replacement is based on a "worst-case scenario"; however, ACD also reports that "… Based on baseline spring discharge data submitted to the Division (UDOGM, 2007), it is determined that the **average** discharge of all state appropriated groundwater from groundwater discharge Area A (Drawing 7-3, Drawing 7-4) is approximately 35 gpm…..The **average** discharge of all state appropriated groundwater from groundwater discharge area B (Drawing 7-4) is approximately 17 gpm." (PAP 7-23) [emphasis added], (b) calculation of replacement quantities based on "averages" is not a worst-case scenario, and (c) the worst-case scenario would be that the replacement requirements would be for the maximum flows for the springs, which is 47 gpm for

ground-water discharge area A, and 121 gpm for ground-water discharge area B, for a total of 168 gpm, and not the 52 gpm reported by ACD.

Pursuant to Utah Code § 78B-5-705, I declare under penalty of perjury, that the foregoing is true and correct.

Signed on this 24th day of January, 2010, in Salt Lake City, Utah.

Mark W. Page

CERTIFICATE OF SERVICE

I hereby certify that on the 25th day of January, 2010, I served a true and correct copy of **PETITIONERS' MEMORANDUM IN OPPOSITION TO THE FIRST MOTION FOR PARTIAL SUMMARY JUDGMENT FILED BY ALTON COAL DEVELOPMENT, L.L.C.** to each of the following persons via e-mail transmission:

Denise Dragoo, Esq.
James P. Allen, Esq.
Snell & Wilmer, LLP
15 West South Temple, Suite 1200
Salt Lake City, UT 84101
ddragoo@swlaw.com
jallen@swlaw.com

Bennett E. Bayer, Esq. *(Pro Hoc Vice)*
Landrum & Shouse LLP
106 West Vine Street, Suite 800
Lexington, KY 40507
bbayer@landsrumshouse.com

Steven Alder, Esq.
Utah Assistant Attorney General
1594 West North Temple
Salt Lake City, UT 84114
stevealder@utah.gov

Michael Johnson, Esq.
Assistant Attorney General
160 East 300 South, 5th Floor
P.O. Box 140857
Salt Lake City, UT 84114-0857
mikejohnson@utah.gov

William L. Bernard, Esq.
Deputy Kane County Attorney
76 North Main Street
Kanab, UT 84741
attorneyasst@kanab.net